WHAT IS CLAIMED IS:

1. A distance measuring system, comprising a control arithmetic unit, a light emitting unit for emitting a measuring light beam and a photodetection unit for receiving a reflection light beam from an object to be measured, and said system being used for measuring a distance by receiving said reflection light beam from said object to be measured, wherein said control arithmetic unit compares a signal based on photodetection amount of the light from said object to be measured as well as a result of distance measurement with a reference data prestored in said control arithmetic unit relating to reflection of said object to be measured, and judges said object to be measured based on a result of the comparison.

2. A distance measuring system according to claim 1, further comprising a density filter for adjusting said photodetection amount of said light beam from said object to be measured, wherein said signal based on said photodetection amount represents a density position of said density filter, and said reference data relating to reflection of said object to be measured is obtained by associating a measured distance with said density position of said density filter.

3. A distance measuring system according to claim 2, wherein said density filter is a disk where density is continuously changed in a circumferential direction, said density filter is rotated by a stepping motor, and said density position corresponds to a number of rotating steps of said stepping motor.

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4.   A distance measuring system according to claim 1, wherein said reference data relating to the reflection of said object to be measured contains change of said photodetection amount due to weather conditions as a tolerance value.

5.   A distance measuring system according to claim 1, further comprising a display unit, wherein a result of judgment on said object to be measured is displayed on said display unit.

6.   A distance measuring system according to claim 5, wherein there are provided at least a prism measurement mode and a non-prism measurement mode, and when said prism mode is selected, said distance is displayed on said display unit only when said object to be measured is judged as a corner cube, and the fact that said object to be measured is not a corner cube is displayed on said display unit when said object to be measured is not judged as a corner cube.

7.   A distance measuring system according to claim 5, wherein photodetection sensitivity can be automatically changed over according to said photodetection amount of said light beam from said object to be measured, said object to be measured is judged according to said photodetection amount, and a result of judgment on said object to be measured is displayed on said display unit.